REMARKS

Claims 1-4 and 6-25 are currently pending in this application. Claims 1-4, 6-14, and 19 have been amended. No new matter has been added.

In the Office Action mailed August 20, 2008, pending claims 1-4 and 6-25 were rejected. More specifically, the status of the application in light of this Office Action is as follows:

(A) The abstract of the disclosure was objected to for not commencing on a separate sheet in accordance with 37 CFR 1.52(b)(4);

(B) Claims 19-25 were rejected under 35 USC 101 for purportedly being directed to non-statutory subject matter;

(C) Claim 10 was rejected under 35 USC 102(e) over U.S. Patent No. 6560443 ("Vaisanen");

(D) Claims 19-25 were rejected under 35 USC 102(e) over U.S. Patent Publication No. 2002/0085719 ("Crosbie"); and

(E) Claims 1-4, 6-9, and 11-18 were rejected under 35 USC 103(a) over Vaisanen and U.S. Patent No. 7382756 ("Barber").

A. Response to the 37 CFR 1.52(b)(4) objection

MPEP 1893.03(e): "The abstract is reproduced on the cover page of the publication, even though it appears on a separate sheet of the international application in accordance with PCT Rule 11.4(a). The requirement of 37 CFR 1.52(b) that the abstract "commence on a separate physical sheet or electronic page" does not apply to the copy of the published international application communicated to the designated Offices by the International Bureau under PCT Article 20. Accordingly, it is *improper* for the examiner of the U.S. national stage application to require the applicant to provide an abstract commencing on a separate sheet if the abstract does not appear on a separate

sheet in the publication of the international application. Unless the abstract is properly amended under the U.S. rules during national stage processing, the abstract that appears on the cover page of the published international application will be the abstract published by the USPTO under 35 U.S.C. 122(b) and in any U.S. patent issuing from the application." (Emphasis added.)

Accordingly, since the abstract does not appear on a separate sheet in the publication (International Publication No. WO 2004/025887) of International Application No. PCT/US2003/028840 and pending U.S. Application No. 10/527,978 is a U.S. national stage application of the international application, the requirement to provide an abstract commencing on a separate sheet should be withdrawn.

B. Response to the 35 USC 101 rejection

MPEP 2106.01: "When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (discussing patentable weight of data structure limitations in the context of a statutory claim to a data structure stored on a computer readable medium that increases computer efficiency) and >In re< *Warmerdam*, 33 F.3d *>1354,< 1360-61, 31 USPQ2d *>1754,< 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held nonstatutory).

Claim 19 has been amended to recite "A computer-readable medium having contents stored thereon which control providing access to a communication network via an access point system comprising:..." Applicants' representative believes that amended claim 19 is directed to statutory subject matter within the meaning of MPEP 2106.01 and thus the rejection of claims 19-25 under 35 USC 101 should be withdrawn.

C. Response to the 102 rejections

1. Rejection in light of Vaisanen

Vaisanen is directed to a multi-transceiver mobile phone 10 such as an IP-based dual mode WLAN/Bluetooth hand-held terminal having an antenna sharing switching arrangement. The mobile phone 10 includes a WLAN transceiver 22 and a BT transceiver 21 controllably coupled to first and second antennas ANT 1, ANT 2, respectively. *See e.g.*, Fig. 2. The WLAN transceiver 22 may conform to the IEEE 802.11 standard for DSSS radio communication and the BT transceiver 21 may be a lower range/power radio operating on the same ISM radio band as the WLAN transceiver 22. *See e.g.*, col. 4, lines 43-50; col. 6, lines 62-66.

The mobile phone 10 further includes a control circuit 23 that operates to control first, second, and third switching units SwA, SwB, SwC, respectively, which couple the WLAN and BT transceivers 21, 22 to the first and second antennas ANT 1, ANT 2 based on the mode of operation of the mobile phone 10. For example, in the WLAN transmit mode, the BT transceiver 22 is disconnected from the ANT 2, the WLAN TX portion of the WLAN transceiver is connected to ANT 1, and the WLAN RX portion is disconnected from ANT 2. During the BT mode, the BT transceiver is connected to the ANT 2, the WLAN TX portion is disconnected from ANT 1, and WLAN RX portion is connected to ANT 1. Finally, in the WLAN receive mode, the third switching unit SwC is switched to connect the second antenna ANT 2 to the second switching unit SwB, while the first switching unit SwA is switched to connect the first antenna ANT 1 to the second switching unit SwB. The WLAN RX can be alternatively connected to either the first or second antennas ANT 1, ANT 2 through the respective turning of the second switching unit SwB.

Amended claim 10 recites "grouping a second set of access point components in at least one controller node component remotely located from each of the multiple radio components...forming distributed access points by establishing a remote communication link between respective ones of the multiple radio node components and the at least one controller node component, wherein each of the multiple radio node

components communicate with the at least one controller node component over the remote communication link using at least one of IEEE 802.11, IEEE 802.15, and IEEE 802.16 network standards." (Emphasis added.)

Vaisanen fails to teach or suggest the features of claim 10. For example, Vaisanen neither teaches "grouping a second set of access point components in at least one controller node component remotely located from each of the multiple radio components", nor "forming distributed access points by establishing a remote communication link between respective ones of the multiple radio node components and the at least one controller node component," as recited in claim 10. Instead, Vaisanen discloses a mobile phone 10 housing a WLAN transceiver 22, BT transceiver 22, and a control circuit 23. *See e.g.*, Fig. 1 and Fig 2. Since Vaisanen's components are positioned within the mobile phone 10 (as illustrated in Fig. 1), it can be inferred that these components are located proximate one another as opposed to remotely. Furthermore, it would not be desirable to have components of a mobile phone remotely located from one another because such configuration would increase the size, power, and cost of the mobile phone.

In computer networking, an access point (AP), e.g., wireless AP (WAP), is a device that allows wireless communication devices to connect to a wireless network using Wi-Fi, Bluetooth and related standards. The WAP usually connects to a wired network, and can relay data between the wireless devices (e.g., computers or printers) and/or wired devices on the network. A distributed AP is an access point having its components distributed between two or more devices that are remote from each other.

Vaisanen does not make reference to a distributed access point or forming a distributed access point. Instead, Figure 5 of Vaisanen merely illustrates two basic service sets, each of which has a single access point and multiple stations. The two access points appear to be coupled to a distribution system. The Figure 5 illustration shows access points that are part of an extended service set, and does not illustrate components of the access point being distributed across a system. Thus, Vaisanen fails to teach or suggest "forming distributed access points by establishing a remote

communication link between respective ones of the multiple radio node components and the at least one controller node component," as recited in claim 10.

Additionally, Vaisanen fails to teach or suggest "wherein each of the multiple radio node components communicate with the at least one controller node component over the remote communication link using at least one of IEEE 802.11, IEEE 802.15, and IEEE 802.16 network standards," as recited in claim 10. Vaisanen discloses that the WLAN transceiver 22 may conform to the IEEE 802.11 standard for DSSS radio communication and the BT transceiver 21 may operate on the same ISM radio band as the WLAN transceiver 22 but with lower power. *See e.g.*, col. 4, lines 43-50; col. 6, lines 62-66. However, as is known in the mobile phone technology, the WLAN transceiver 22 and the BT transceiver 21 do not use their respective radio band of communication to communicate therebetween, especially when the transceivers are located within the same cell phone.

Consequently, Vaisanen does not teach or suggest the features of claim 10. Accordingly, this Section 102 rejection of claim 10 should be withdrawn.

2. Rejection in light of Crosbie

Crosbie is directed to a network 20 having a roaming server 22, access points 24 to a WLAN 36, and mobile devices 26. The network 20 connects the access points 24 to the roaming server 24 via a network connection 28. The roaming server serves as a central controller in the network. The access points 24 are also wirelessly connected to the mobile device 26 and serve as receiving points or connecting points. In response to a triggering event, the roaming server 22 determines that the mobile device 26 should change its LAN connection point to a different one of the access points 24 (i.e., handoff of the mobile device from one access point to another). The triggering event may, for example, be the moving of the mobile device from one location to another, receiving a request from the mobile device or access point to move the mobile device, or receiving an indication that the different one of the access points is less congested.

Claim 19 recites "multiple radio nodes each comprising a first set of access point layers...an access point controller in communication with the multiple radio nodes,

wherein the access point controller comprises a second set of access point layers distinct from the first set of access point layers, wherein the access point controller is physically separated from at least some of the multiple radio nodes...a remote communication link for connecting the each of the radio nodes to the access point controller to form multiple wireless network access points."

Crosbie fails to teach or suggest the features of claim 19. For example, Crosbie fails to teach or suggest "a remote communication link for connecting the each of the radio nodes to the access point controller to form multiple wireless network access points," as recited in claim 19. The Office Action equates the radio nodes comprising a first set of access point layers with the "access points 24." Paragraph 36 of Crosbie teaches that the access point 24 acts "as a receiving point, or connecting point, to establish the wireless connection 30 with each mobile device 26." In other words, the access point 24 of Crosbie is nothing more than a conventional access point. As is known in the art, an access point (AP) layer is different from an access point (AP). A conventional access point has its core components (or layers) integrated into a single device. For example, the core components may include an RF component, amplifier, antenna, baseband module, MAC module, processor, memory, LAN interface, etc. Thus, the access point 24 of Crosbie has core layers integrated into a single device while the access points of claim 19 include radio nodes (or first set of AP layers) communicatively coupled to the AP controller (or second set of AP layers) via a remote communication link.

Additionally, Crosby fails to teach or suggest "an access point controller in communication with the multiple radio nodes, wherein the access point controller comprises a second set of access point layers distinct from the first set of access point layers," as recited in claim 19. The Office Action equates the access point controller of claim 19 with the "roaming server 22." As discussed above, the roaming server 22 controls handoff of the mobile device 26 from one access point 24-1 to another access point 24-2 in response to a triggering event. As also discussed above, the access points of claim 19 comprise radio nodes (or first set of AP layers) communicatively

coupled to the AP controller (or second set of AP layers). Thus, the AP controller is a portion (e.g., second set of AP layers) of a respective one of the claim 19 access points that is in communication with another portion (e.g., first set of AP layers) of the respective one of the claim 19 access points. Consequently, the roaming server 22 communicates with the access points 24, while the access point controller of claim 19 is in communication with a portion of the respective one of the access points (e.g. in communication with the multiple radio nodes or first set of access point layers).

Accordingly, Crosby does not teach or suggest the features of claim 19 and this Section 102 rejection of claim 19 as well as claims 20-25, which depend therefrom, should be withdrawn.

D. Response to 103 rejections in view of Vaisanen and Barber

Although the language of claim 10 is not identical to that of independent claims 1 and 14, the allowability of claims 1 and 14 over Vaisanen will be apparent in light of the above discussion. As discussed above, Vaisanen fails to teach or suggest a distributed access point having its core components remotely distributed throughout a system and communicatively coupled via a remote communication link. Furthermore, Barber fails to overcome the deficiencies of Vaisanen as the Office Action did not specifically indicate that Barber overcame these deficiencies. For example, Barber fails to teach "one of the access points provided to the communication network comprises a combination of the first set of access point components and the third set of access point components, and another one of the access points provided to the communication network comprises a combination of the second set of access point components and the third set of access point components" or "the first set of access point components is communicatively coupled to the second set of access point components to form a distributed access point," as respectively recited in claims 1 and 14.

Additionally, dependent claims 3-4, 6-9, 11-13, and 15-18 rejected under Section 103 are patentable over Vaisanen and Barber for elements they recite as well as for incorporating the elements of the independent claims.

Accordingly, the claims are patentable over the applied references.

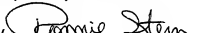
Conclusion

In view of the foregoing, the pending claims comply with the requirements of 35 U.S.C. § 112 and are patentable over the applied art. The applicants accordingly request reconsideration of the application and a mailing of a Notice of Allowance. If the Examiner has any questions or believes a telephone conference would expedite prosecution of this application, the Examiner is encouraged to contact Ronald Stern at (206) 359-8000.

Please charge any deficiencies, or credit any overpayments, to our Deposit Account No. 50-0665, under Order No. 340158008US1 from which the undersigned is authorized to draw.

Dated: 1-21-09

Respectfully submitted,

By 

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